

Asian Academy of Management Journal, Vol. 8, No. 2, 67–89, July 2003

CORPORATE GOVERNANCE, OWNERSHIP STRUCTURE AND CORPORATE DIVERSIFICATION: EVIDENCE FROM THE MALAYSIAN LISTED COMPANIES

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ABSTRACT

Previous research has contributed much to our understanding of the relationship between corporate diversification strategy and corporate governance quality. The majority of published works has been on sophisticated and mature markets in first world nations. This paper extends previous knowledge by examining this relationship in a developing country. Malaysia is a developing country that provides a rich setting for corporate governance research. The structure of the business environment and the availability of published data make it an interesting research site.

The results showed that outside blockholding especially non-institutional blockholding was negatively associated with diversification. However, evidence of significant relationship between managerial ownership and diversification was not found although the directions were generally as expected. Similarly, good corporate governance was shown to reduce diversification activities. The variable for separate board structure was consistently significant in most of the estimations. However, the other measure of corporate governance namely the proportion of outside directors was not as significant as might be expected. The study opens the way for a richer understanding of the links between corporate governance, ownership structure and corporate diversification in a developing country.

INTRODUCTION

Corporate governance systems vary a great deal around the world. In Malaysia, debates on corporate governance began to be highlighted following the East Asian financial crisis in the middle of 1997. Prior to that, a number of companies in Malaysia had expanded and diversified due to the availability of easy credits at a relatively low cost to borrowers (Fatimah, 2001). Initially, diversification has some economic and strategic values (Choo Kah Yean, 1999). Over time, however, these companies are likely to be diversified beyond core competencies and capabilities, as they are ambitiously involved in unrelated businesses (Choo Kah Yean, 1999). Previous studies have found that firms which diversified into unrelated business were less profitable than other diversified firms (Palepu, 1985). It is believed that diversification into unrelated areas which companies have no expertise in is one of the causes of the financial crisis (Fatimah, 2001). Arguably, the decision to diversify into

* The authors acknowledge financial support provided by Universiti Utara Malaysia.

unrelated businesses could have resulted from the lack of proper governance mechanisms.

Recently, the government has taken a few steps to review and strengthen corporate governance in Malaysia, such as the establishment of the Finance Committee on Corporate Governance and the Malaysian Institute of Corporate Governance (MICG). A few authorities, namely the Malaysian Institute of Accountants (MIA), the Kuala Lumpur Stock Exchange (KLSE) and the Securities Commission (SC) have introduced certain requirements to enhance good corporate governance.

Most of the articles of association of Malaysian firms delegate all powers of management to the board of directors.¹ Thus, shareholders are not entitled to override the board of directors' decisions unless in matters specifically reserved to the general meeting where shareholders have their right to vote. Although shareholders are the owners of the business, extensive power to control is vested in the board of directors that manage the firm. This division of power creates separation of ownership and control. Conflict of interests between shareholders and managers in the firms may lead to agency problems (Berle & Means, 1932; Jensen & Meckling, 1976).

To satisfy the interest of shareholders, managers should pursue strategies that are consistent with maximizing shareholders' wealth. However, absence of governance control will lead managers to pursue strategies that may deviate from the interest of the shareholders. High-risk high-return strategies and less diversification are attractive to shareholders who hold a diversified portfolio of investment. However, as opposed to shareholders, the managers' wealth is not well diversified and hence, they depend on the survival of the firm. Therefore, managers prefer low risk strategies to avoid being associated with financially distressed firms. Managers prefer to reduce their employment-risk through corporate diversification (Amihud & Lev, 1981). Furthermore, corporate diversification may provide other private benefits to managers. For example, diversification might benefit managers through the power and prestige associated with managing a larger firm (Jensen, 1986); managerial compensation which is positively related to firm size (Jensen & Murphy, 1990); and make managers indispensable to the firm (Shleifer & Vishny, 1989). As a result, managers may pursue diversification strategies even though shareholders' interests might be at stake.

Although risk-reduction, earning smoothing, increased debt capacity and administration economies of scale are often cited as economic gains from diversification, recently many researchers find that the diversification strategies might not benefit shareholders (Byrd & Hickman, 1997). Various control mechanisms such as effective board monitoring on managers (Baysinger & Hoskisson, 1990), managerial ownership (Denis et al., 1997), outside blockholder ownership (Denis et al., 1997) and institutional shareholding (Baysinger, Kosnik & Turk, 1991), have

been suggested to help mitigate the agency cost associated with diversification strategy.

Most of the empirical studies on corporate diversification have been conducted in developed countries. However, in developing countries like Malaysia, the practices of corporate governance may be different from that of developed countries such as United States, Germany and Japan that have relatively successful corporate governance systems (Shleifer & Vishny, 1997) due to corporation law, economic, cultural and political differences. To date, published empirical studies on the relationship between governance control and corporate diversification in Malaysia are virtually negligible.

The objectives of this study are:

1. to examine the influence of board structure on diversification of the public listed firms in Malaysia.
2. to examine the relationship between ownership structure and diversification of the public listed firms in Malaysia.

The findings of this study will provide information to business communities to assess corporate governance practices in Malaysia and also to regulatory agencies to develop better corporate governance framework.

THEORETICAL AND HYPOTHESES DEVELOPMENT

Corporate Diversification

Different perspectives of managers and shareholders on risks and return aspect in diversification strategies motivate most researchers to study mechanisms that might alter the risks preferential of manager-agent to align them with the interests of shareholder-principal. Agency theory explains that diversification is driven by managers' interests such as employment risk-reduction, power, prestige and high compensation. On the other hand, shareholders can diversify their portfolios at low cost to balance their investment risk and therefore they might not favor corporate diversification strategies. Due to the nature of corporate structure, shareholders might be forced to accept the firms diversification strategy although it might not suit their risk and return profiles. Hence, agency theory would predict a negative relationship between diversification and firm value. A few studies, which examined the relationship between firm performance and diversification, found negative or insignificant relationship between the two variables (Lang & Stulz, 1994; Rumelt, 1982; Montgomery, 1985). Montgomery and Wernerfelt (1988) showed that firm profitability decreases as measure of diversification increases.

Montgomery (1994) concluded that diversification is not a guaranteed route to success. The study found that, on average, firms with a higher level of diversification are less profitable than firms with lower level of diversification. Since over-diversified firms in the U.S. in 1960s and 1970s did not increase firm value (Jensen, 1986), a substantial number of the firms later divested in 1990s (Kaplan & Weisbach, 1992). Interestingly, Denis et al., 1997 found that the decreases in diversification were associated with corporate events such as acquisition attempt, block purchase and indications of financial distress. The issue here is why do firms diversify if diversification is likely to be negatively related to their performance.

Ownership Structure

Management ownership is one of the incentives in aligning the interest of managers with that of shareholders. In addition, the presence of outside blockholders is also an important mechanism in corporate governance (Byrd, Parrino & Pritsch, 1998). However, large ownership or ownership concentration may contribute to deficiencies in corporate governance (Thillainathan, 1999). In Malaysia the controlling-shareholder (i.e. those holding more than 50% ownership) through the pyramid structure is common (Thillainathan, 1999). The controlling shareholders, either individuals/families or corporations, are in the position to expropriate minority interests using their dominant voting right.

Denis et al. (1997) showed that the level of diversification is negatively related to managerial ownership. When managers own substantial firm equity, they are likely to have incentives to keep the strategies in line with the preferences of other owners since their bonding to firms' outcome is high (Fama & Jensen, 1983). However, this relationship depends largely on the level of ownership. An increase in managerial ownership is likely to be associated with a decrease in diversification. Amihud and Lev (1981) suggested that manager-controlled firms engaged more in conglomerate acquisition than owner-controlled firms, due to their greater need for personal risk reduction. This can be characterized as agency conflicts between the owner and the manager that are derived from the manager's tendency to appropriate perquisites out of firms' resources for his own consumption (Jensen & Meckling, 1976). Thus, it is hypothesized (in alternative form) that,

H_1 : Diversification is negatively related to managerial ownership.

The individual shareholders in firms that have wide dispersed ownership do not have sufficient incentives to monitor the behavior of managers. The investors can take a free ride and are more likely to rely on others to govern the management (Alchian & Demsetz, 1972). Holderness and Sheehan (1988) discovered that majority-shareholders (controlling-shareholders) are usually directly involved in management. They represent their own interests that need not coincide with the interests of other

shareholders in the firm. They may agree with diversification to reduce their risk just as managers do (Amihud & Lev, 1981). However, most researchers suggest that greater concentration of shares (outside blockholder ownership) will lead to a more effective alignment of interests between management and shareholders, resulting in higher performance (Li and Simerly, 1998). Denis et al. (1997), Bethel and Liebeskind (1993) and Hill and Snell (1988) found that outside blockholder ownership results in reduction in diversification and that blockholders have a disciplinary effect on managers. Thus, this study also examines the relationship of outside blockholders' ownership with levels of diversification. It is hypothesized (in alternative form) that,

H₂ : Diversification is negatively related to outside blockholders' ownership.

Outside blockholders can be institutional or non-institutional shareholders. Whilst outside blockholders are generally known to have significant impact on corporate strategies, the role of the institutional blockholders is less clear. Large size of shareholding by institutional blockholder may also provide sufficient incentives to monitor management. For example, McConnell and Servaes (1990) proved that the percentage of shares owned by institutional shareholders are positively and significantly related to performance as measured by Tobin's Q. In addition, research done in Malaysia found that firms with significant institutional shareholders are associated with better performance than firms with negligible institutional shareholders (Shamsul Nahar et al., 1998). Therefore, this study also investigates the influence of outside block ownership on diversification strategy separately for individual and institutional shareholders (Baysinger et al., 1991). The hypotheses are stated (in alternative form) as:

H_{2A} : Diversification is negatively related to institutional ownership.

H_{2B} : Diversification is negatively related to non-institutional ownership.

Board Structure

Besides managerial and outside block ownership, many advocate that boards comprising a majority of outside directors may reduce conflict of interests (Fama & Jensen, 1983; Kosnik, 1987). Boards' composition and structure could play an important role to moderate the activities of management (Baysinger & Hoskisson, 1990). The Finance Committee in its Report on Corporate Governance, which sets out the Malaysian Code on Corporate Governance, views that good corporate governance rests firmly with the board of directors. The Code regards improving board composition as important to ensure that there are effective independent members on the board and that the decision process is independently carried out. Sufficient independent directors are particularly important when dealing with responsibilities

such as financial reporting, determining managers' and directors' remuneration and other strategic decision makings. The KLSE listing requirements, which were revamped in 2001, state that at least one-third of the board should comprise of independent, non-executive directors. Under the new code, the audit, remuneration and nomination committees must consist of at least two independent, non-executive directors.

An increase in ratio of outside to inside directors is likely to enhance control over managerial performance (Zajac & Westphal, 1996). Beasley (1996) showed that the incidence of financial frauds is negatively related to the ratio of outside directors. Zantout & O'Reilly-Allen (1996) found that the probability of diversification decreases when there is an outside-dominated board. Therefore, this study predicts that firms with board composition dominated by outside directors are less engaged in diversification activities. Based on this reasoning, it is hypothesized (in alternative form) that,

H₃ : Diversification is negatively related to the proportion of outside directors to total directors.

To reduce agency cost created by the separation of ownership and control, agency theory suggests separate leadership structure, i.e. firms should have different people to hold the chairmanship of the corporate board and the CEO position (Fama & Jensen, 1983). It is difficult for an individual who serves as both chairman and CEO to perform his duties objectively. Fosberg and Nelson (1999) concluded in their study that firms that adopt a separate leadership structure significantly improved their financial performance over a three year period following the change to separate leadership structure. Thus, this study also examines the relationship of separate leadership structure with levels of diversification. It is hypothesized (in alternative form) that,

H₄ : Diversification is negatively related to separate leadership structure.

METHODOLOGY

Data Collection

The sample size in this study was determined based on the recommendation table by Sekaran (2000). Given the population size of 529 firms listed on the KLSE (excluding financial and banking industries) as of 31 December 1995, the suggested sample size is between 217 and 226 (Sekaran, 2000). KLSE industry classification was used to stratify the population. Then, from each stratum, the sample was systematically selected. A final sample of 236 public companies that were listed on the Kuala

Lumpur Stock Exchange (KLSE) in 1995 were utilized. The year 1995 was chosen since the economic and political environments were stable. As mentioned before, during opulent economic times, most of the companies were involved in frantic diversification activities (Choo, 1999). Data were hand-collected using annual reports of the firms for financial year ending 1995. KLSE and the annual handbook.

Model Specification and Variables Measurement

To test the relationship between ownership and board structure with corporate diversification the following models were utilized:

Model A

$$\text{DIVERSIFICATION} = \beta_0 + \beta_1 \text{MOWN} + \beta_2 \text{BOWN} + \beta_3 \text{OUTDIR} + \beta_4 \text{LEADSTR} + \beta_5 \text{FSIZE} + \beta_6 \text{LEV} + \beta_7 \text{FAGE} + \beta_8 \text{ROE} + e_i$$

Where,

DIVERSIFICATION (measured using three different proxies):

	= Number of segments (NSEG)
	= Herfindahl index constructed from sales (HSALES)
	= Herfindahl index constructed from assets (HASSETS)
MOWN	= percentage of ordinary shares owned by executive directors as a group
BOWN	= percentage of ordinary shares owned by outside blockholders (at least five percent)
OUTDIR	= proportion of non-executive directors to total board composition
LEADSTR	= binary variable with a firm having separate leadership coded as 1 and other firms coded as 0
FSIZE	= Log_{10} total assets
LEV	= long term debt-to-total asset ratio (excluding deferred tax)
FAGE	= number of years the firm has been listed
ROE	= return on equity
e_i	= a random error term
i	= indicating data for the i^{th} firm

Model A is used to test Hypotheses H_1 , H_2 , H_3 and H_4 . In order to test H_{2A} and H_{2B} , the following model is estimated:

Model B

$$\text{DIVERSIFICATION} = \beta_0 + \beta_1\text{MOWN} + \beta_2\text{ISOWN} + \beta_3\text{NINOWN} + \beta_4\text{OUTDIR} + \beta_5\text{LEADSTR} + \beta_6\text{FSIZE} + \beta_7\text{LEV} + \beta_8\text{FAGE} + \beta_9\text{ROE} + e_i$$

Where,

All variables are measured as in Model A except:

ISOWN	= percentage of ordinary share owned by block institutional shareholders
NINOWN	= percentage of ordinary share owned by block non-institutional shareholders

The following section discusses the measurement of variables included in the models.

Corporate Diversification

Data on diversification used in this study was based on information in the segmental disclosure in notes to the account of the firms' annual reports. As required by the Companies Act 1965, all companies have to disclose turnover and profit before tax for each class of business. In addition, Accounting Standard (IAS 14) which is approved by the Malaysian Accounting Standard Board (MASB) requires all public listed companies to report information for industrial and geographical segments whose sales, assets or net profit represent ten percent or more of consolidation total.²

Diversification was measured based on three proxies namely, the number of business segments (NSEG), Herfindahl (H) index constructed from sales (HSALES) and Herfindahl (H) index constructed from assets (HASSETS) (Lang & Stulz, 1994; Denis et al., 1997). Only information on industrial segment was used.

The formulae for the H index are as follows:

$$H \text{ sales}_i = \sum (\text{Sales per segment} / \text{Total sales})^2$$

$$H \text{ assets}_i = \sum (\text{Asset per segment} / \text{Total assets})^2$$

Managerial Ownership

Managerial ownership (MOWN) was measured using percentage of shares owned by executive directors as a group (Hoskisson, Johnson & Moesel, 1994). The measure included both direct and indirect interests in the company.

Outside Blockholder Ownership

Blockholder ownership (BOWN) was measured by percentage of ordinary share owned by outside major shareholders³ (Denis et al., 1997). In addition, blockholders were divided into institutional shareholders (ISOWN) and non-institutional shareholders (NINOWN). Institutional shareholders include insurance companies, pension funds and professional fund managers that hold shares on behalf of individuals.⁴

Outside Directors

Outside directors' influence (OUTDIR) was measured by proportion of non-executive directors to total board composition (Barnhart & Rosenstein, 1998). The information is disclosed in the director's report.

Leadership Structure

Leadership Structure (LEADSTR) was measured using a binary variable with firms having separate leadership coded as 1 and other firms coded as 0 (Zajac & Westphal, 1996).

Based on previous research, four (4) controlling variables are utilized in this study. Whilst we concentrate on hypothesis variables and their effects on diversification (dependent variable), there are other factors that might affect diversification and the results would be confounded if we cannot control the effects that different factors might have on diversification. They are:

1. Firm size (FSIZE) which was measured as logarithm to the base of 10 of total assets of a company.
2. Leverage (LEV) which was measured as proportion of long-term debt (excluding deferred tax) to total equity in a company.
3. Firm age (FAGE) which was measured as number of years the firm has been listed.
4. Profitability (ROE) was measured as return on equity.

DATA ANALYSIS

Descriptive and Univariate Analyses

As discussed earlier, the sample of 236 public companies that were listed on Kuala Lumpur Stock Exchange (KLSE) in 1995 were selected. However, seventeen (17) companies were eliminated, leaving 219 companies in the final sample. Four (4)

companies stated (in their annual reports) that they did not comply with IAS 14 in terms of segmental disclosure. Thirteen (13) companies changed their financial year-ends and that made comparison of corporate annual data inappropriate. Table 1 describes the number of business segments disclosed in the company annual reports.

TABLE 1
NUMBER OF SEGMENTS DISCLOSED IN THE COMPANY
ANNUAL REPORTS (N = 219)

Number of segments	Frequency	Percent	Cumulative percent
1	101	46.1	46.1
2	18	8.2	54.3
3	23	10.5	64.8
4	31	14.2	79.0
5	23	10.5	89.5
6	11	5.0	94.5
7	5	2.3	96.8
8	5	2.3	99.1
9	2	0.9	100.0
Total	219	100.0	

Note: Segments are lines of business for which separate accounting disclosures are made by management in accordance with IAS 14. Single-segment companies are those reporting exactly one segment in the annual reports, whereas multi-segment companies are those reporting two or more segments.

53.9 percent of the companies in the sample were multi-segment companies and 46.1 percent were single-segment companies. The majority of multi-segment companies had three to four lines of businesses. The highest segment was nine but only two companies were involved in nine lines of businesses.

Table 2 presents the descriptive statistics for continuous and dichotomous variables. The totals are in Malaysian Ringgit (RM).

The percentage of management ownership for the sample population (all cases) ranged from zero to 100 percent, with average shareholding of about 30 percent.⁵ The outside blockholding ranged from 0 to about 90 percent, with average shareholding of about 27 percent. The proportion of outside directors to total directors varied from 21 percent to 100 percent, with average proportion of outside directors of about 70 percent. In terms of leadership structure, 89 percent of the companies have separate leadership for the posts of CEO and the board chairman. The sample companies had an average gearing level (LEV) of about 10 percent and average ROE of about 29 percent which were very similar to the study by Ayoib and Houghton (2000) which utilized the total population of KLSE listed companies in 1993–1995.

TABLE 2
DESCRIPTIVE STATISTICS FOR ALL VARIABLES (N = 219)*

Variable	Minimum	Maximum	Mean	Std. Deviation
NSEG	0.00	9.00	2.300	2.460
HSALES	0.00	1.00	0.324	0.343
HASSETS	0.00	0.97	0.269	0.292
MOWN	0.00	100.00	26.599	30.457
BOWN	0.00	90.04	34.145	27.003
ISOWN	0.00	69.84	4.788	11.006
NINOWN	0.00	90.04	29.494	26.618
OUTDIR	0.21	1.00	0.699	0.169
LEADSTR	0.00	1.00	0.890	0.310
FSIZE	8.29	16.71	12.414	1.428
LEV	0.00	0.46	0.079	0.103
AGE	0.07	35.10	10.636	10.746
ROE	-2.66	2.13	0.288	0.360

* For dichotomous variable, the mean represents the proportion of firms with value equal to 1 for the variable.

Table 3 exhibits a matrix of correlations for the variables for both parametric and non-parametric statistics.

The overall correlations among the explanatory variables were relatively low and below 0.5, except for the correlation between MOWN and BOWN, and MOWN and NINOWN. As expected, the correlations between the variables that represent managerial ownership and outside shareholding were negative and high indicating the dominating nature of the relationship. Whilst multicollinearity is not a problem in this study, further tests are provided and discussed in a later section.⁶

Table 4 provides the results of the T-test and Wilcoxon Signed-Rank test for mean and distribution differences between single and multi-segment companies.⁷

Generally, the results provided directional support to the theory proposed earlier. All of the hypothesis variables were in the predicted directions. However, only OUTDIR was significantly (albeit weakly) associated with diversification. This was consistent with the notion that the larger the proportion of outside directors in the board, the lower would be the level of diversification. Whilst univariate tests provide preliminary insight and have an advantage in that measurement errors in one independent variable do not affect the test results for other variables, they do take into account any interrelationship among the independent variables. This may diminish the usefulness of these comparisons. The following section discusses the results of the multivariate analysis.

Table 3

TABLE 4
MEANS AND STANDARD DEVIATIONS (IN PARENTHESIS) OF THE INDEPENDENT
VARIABLES BETWEEN SINGLE-SEGMENT (SS) AND
MULTI-SEGMENT (MS) COMPANIES^a

Variable	Expected sign	MS (N = 118)	SS (N = 101)	T-Test	Wilcoxon Z
MOWN	–	25.83 (28.44)	27.50 (32.78)	–0.405	
BOWN	–	32.07 (27.73)	36.57 (26.05)	–1.232	
ISOWN	–	4.63 (11.20)	4.98 (10.83)	–0.232	
NINOWN	–	27.69 (27.42)	31.60 (25.63)	–1.083	
OUTDIR	–	0.68 (0.17)	0.72 (0.16)	–1.421 [†]	
LEADSTR	–	0.87 (0.33)	0.92 (0.27)		–1.150
FSIZE	+/-	12.95 (1.30)	11.79 (1.31)	6.533 [*]	
LEV	+/-	0.09 (0.11)	0.06 (0.10)	2.209 [#]	
AGE	+/-	13.03 (10.52)	7.83 (10.37)	3.669 [*]	
ROE	+/-	0.26 (0.38)	0.33 (0.33)	–1.409	

^a For binary variable, the mean represents the proportion of firms with value equal to 1 for the variable.

^{*} Significant at 1 percent level (one-tailed where signs are expected, two-tailed otherwise).

[#] Significant at 5 percent level (one-tailed where signs are expected, two-tailed otherwise).

[†] Significant at 10 percent level (one-tailed where signs are expected, two-tailed otherwise).

Multivariate Analysis

Table 5 presents the results of multivariate regressions used to test the hypotheses stated earlier.

TABLE 5
EXPLAINING DIVERSIFICATION STRATEGY: RESULTS OF ORDINARY LEAST SQUARE
REGRESSION^a (N=219) (NUMBERS IN PARENTHESIS ARE T – STATISTICS)

Independent variables ^b	Expected sign	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
MOWN	–	–0.002 (–0.28)	0.001 (–0.40)	–0.001 (–0.73)	–0.003 (–0.42)	0.001 (–0.23)	–0.001 (–0.75)
BOWN	–	–0.013 (–1.70#)	–0.001 (–0.98)	–0.001 (–1.39†)	–	–	–
ISOWN	–	–	–	–	–0.003 (–0.19)	–0.002 (–1.13)	–0.001 (–0.81)
NINOWN	–	–	–	–	–0.015 (–1.86#)	–0.001 (–0.71)	–0.001 (–1.40†)
OUTDIR	–	–0.484 (–0.46)	–0.129 (–0.80)	0.004 (0.03)	–0.547 (–0.52)	–0.129 (–0.81)	0.002 (0.02)
LEADSTR	–	–0.609 (–1.81#)	–0.115 (–1.54†)	–0.029 (–0.48)	–0.615 (–1.82#)	–0.117 (–1.56†)	–0.030 (–0.50)
FSIZE	+/-	0.921 (7.57*)	0.085 (5.24*)	0.056 (3.84*)	0.918 (7.58*)	0.085 (5.22*)	0.056 (3.83*)
LEV	+/-	0.316 (0.18)	–0.306 (–1.43)	–0.020 (–0.10)	0.373 (0.21)	–0.310 (–1.45)	–0.021 (–0.11)
AGE	+/-	0.030 (2.13#)	0.004 (2.10#)	0.004 (1.92†)	0.031 (2.15#)	0.004 (2.09#)	0.004 (1.91†)
ROE	+/-	–1.141 (–2.64*)	–0.206 (–3.79*)	–0.179 (–4.10*)	–1.170 (–2.69*)	–0.204 (–3.75*)	–0.178 (–4.04*)
Constant	+/-	–7.769 (–4.23*)	–0.457 (–1.81†)	–0.326 (–1.46)	–7.658 (–4.19*)	–0.461 (–1.80†)	–0.318 (–1.41)
F-Stat		15.01*	6.71*	5.33*	13.33*	5.86*	4.76*
Adj. R ²		0.3344	0.1705	0.1318	0.3367	0.1759	0.1326

^a The results were adjusted for heteroscedasticity using the method of Cook and Weisberg (1982).

^b Variables are defined in Table 3.

* Significant at 1 percent level (one-tailed where signs are expected, two-tailed otherwise).

Significant at 5 percent level (one-tailed where signs are expected, two-tailed otherwise).

† Significant at 10 percent level (one-tailed where signs are expected, two-tailed otherwise).

Table 5 presents the regression results for all hypotheses. The results were adjusted for heteroscedasticity using the method of Cook and Weisberg (1982) since the diagnostic tests revealed that the assumption of homoscedastic disturbances (e_i) was violated.⁸ The dependent variable is diversification proxied by three (3) measures namely, NSEG (number of business segments) for Model 1 and Model 4, Herfindahl (H) index constructed from sales (HSALES) for Model 2 and Model 5, and Herfindahl (H) index constructed from assets (HASSETS) for Model 3 and Model 6. The models were all significant at $p < 0.001$ and the adjusted R^2 ranged from 13 percent to 34 percent. The Variance-Inflating Factors (VIFs) for all variables in all regressions were well below three (3) and this suggests multicollinearity was not a problem in this analysis (see endnote 6). Similarly, the regression models were correctly specified. The Ramsey RESET test using powers of the fitted values of the dependent variable showed no specification bias.

In all six models, the coefficients for managerial ownership (MOWN) (Hypothesis H_1) and institutional shareholding (ISOWN) (Hypothesis H_{2a}) were not significant although they were in the predicted directions. The results suggest that increases in managerial ownership and institutional shareholding do not reduce diversification as conjectured by the agency theory. The result is similar to Zantout and O'Reilly-Allen (1996) who also did not find that managerial stock ownership to be related to diversification. Similarly, proportion of outside directors to total directors (OUTDIR) (Hypothesis H_3) were not significant in all estimations and in two regressions, the signs were in the opposite directions. It seems that the presence of outside directors on the board does not influence the decision process with regards to diversification strategy. Perhaps, outside directors were unable to control diversification activities as they did not have contact with the daily operations of the firm (Baysinger & Hoskisson, 1990). Further, they might have been appointed based on their relationship with the CEO (Mace, 1986). Another reason could be attributed to the fact that there is a limited pool of qualified individuals in Malaysia as most of the outside directors tend to be from the elite group including influential politicians, high-ranking ex-army or ex-police officers, members of royalty and government bureaucrats (Horii, 1991).

Consistent with expectations, diversification was negatively related to separate leadership structure. This is similar to the finding by Zantout and O'Reilly-Allen (1996). The variable LEADSTR was statistically significant at five percent level in Model 1 and Model 4 and 10 percent significant level in Model 2 and Model 5. However, LEADSTR was not significant in Model 3 and Model 6 although the signs were in the predicted directions. Interestingly, the presence of external blockholders (BOWN) was found to significantly reduce diversification activities. The variable was significant in Model 1 ($p < 0.05$) and Model 3 ($p < 0.10$). The results suggest that blockholders help to monitor the activities of the managers (Demsetz, 1983). The results also support the earlier finding by Denis et al. (1997). Model 4 and Model 6 revealed that the main effects were due to the presence of non-institutional

shareholding as indicated in higher confidence level in Model 4 and Model 6 as compared to Model 2 and Model 4 respectively. The result implies that institutional investors are less effective as compared to non-institutional investors in monitoring managers.

The results of the control variables were also interesting. Except leverage, all other control variables were statistically significant. Firm size and age were positive and significant in all estimations indicating that as corporate size grows and age of the firm increases, the firm is likely to diversify more into unrelated businesses in search of new opportunities. Consistent with previous studies (Wenerfelt & Montgomery, 1988), the variable that proxied for profitability (ROE) was negative and significant in most estimations. This shows that corporate profitability decreases as diversification increases and it reinforces the view that diversification is undertaken for reasons other than performance maximization (Montgomery, 1994).

The results also showed that Model 1 and Model 3 provided better goodness of fits than other models as shown by higher adjusted R^2 . Similarly, the overall significance of the multiple regression models were more pronounced in Model 1 and Model 3 as indicated by higher F-statistics. In other words, the number of business segments (NSEG) is a better measurement for diversification than the Herfindahl Index for this study.

Sensitivity Analyses

Additional analyses⁹ were carried out to examine the sensitivity of the models to the size effect, different regression technique and different measures of dependent and hypothesis variables. Firstly, FSIZE was dropped from the equation and the model was re-estimated. The results for the hypothesis variables were similar except for the variable OUTDIR in Model 1, Model 2, Model 4 and Model 5. The variable OUTDIR was negative and significant at 10 percent level (one-tailed) in those models.

Secondly, MOWN, BOWN and NINOWN were dropped one at a time from the equation and the model was re-estimated. This is because they were highly correlated with one another. The results for the independent variables were qualitatively similar when MOWN or NINOWN was excluded from the analyses. However, NINOWN was negative and significant at 5 percent level for Model 1 and Model 4 when BOWN was dropped from the models.

Thirdly, further estimation were performed using the number of subsidiaries as the measure for diversification (i.e. the dependent variable). Only LEADSTR was negative and significant in the regressions ($p < 0.10$). Other hypothesis variables were not significant.

Fourthly, further test of ownership control based on directors' interest instead of manager's ownership was carried out. Similar to ownership control, the variable that proxied for directors' interest was not significant in all models. The results of other hypothesis variables were identical to the original results in Table 5.

Fifthly, the model was re-estimated using the logit regression procedure based on single/multiple segment dichotomy. The results showed that the overall significance of the logit regression models was high as indicated by significant chi-square statistics ($p < 0.001$). However, only LEADSTR was significant at five percent level in the predicted direction. The results suggest that a continuous dependent variable might be more suitable than a binary dependent variable.

Finally, regressions were also rerun to assess the extent to which the results were driven by outliers. However, the results based on Cook's Distance tests did not find any outlier in the database and hence, outlier bias was not present to give undue influence on the regression equations.

Further tests showed that the results were not particularly sensitive to the size effect, different regression technique and different measures of dependent and hypothesis variables. Taken together, the results of the hypothesis variables are supportive of the theory proposed in the study especially with regards to the importance of outside blockholders and the separation of leadership structure in disciplining the management in terms of diversification activities.

LIMITATION AND CONCLUDING REMARKS

The present study examines the effect of ownership structure and corporate governance on firm diversification. The sample of the study comprises 219 companies listed on the KLSE for both the Main Board and the Second Board as of 31 December 1995. The results showed that outside blockholding especially non-institutional blockholding was negatively associated with diversification. However, evidence of significant relationship between managerial ownership and diversification was not found although the directions were generally as expected. Similarly, good corporate governance was shown to reduce diversification activities. The variable for separate board structure was consistently significant in most of the estimations. However, the other measure of corporate governance namely the proportion of outside directors was not significant as might be expected.

Taken together, the results suggest that outside blockholding especially non-institutional blockholding could play an important role in overseeing the behaviour of management. Whilst most commentators suggest that the minority shareholders in Malaysia are not getting fairer treatment from the management or controlling

shareholders, this study shows that they are quite effective in disciplining the management (at least in curbing the diversification activities). Perhaps, they are beginning to realise their roles better and the recent move by the government to initiate the setting of Minority Shareholder Watchdog Group (MSWG) (comprising the five biggest, state-owned, fund managers in the country, including Malaysia's biggest private pension plan, the Employees Provident Fund) is a step in the right direction. Similarly, separation of the roles of the Chief Executive and Chairman could also improve corporate governance as evidenced in this study. The result is consistent with the recommendation of the Code of Corporate Governance for the separate leadership structure to ensure an appropriate balance of power, increasing accountability and increasing capability of the board for independent decision making.

Like any study, there are limitations to the design used. For example, the study considered only KLSE companies. The validation of the conclusions might not hold for small or medium companies. Similarly, the data was based on 1995 annual reports where diversification activity was believed to be at its peak before the Asian financial crisis. Perhaps, recent data especially after the implementation of the Code of Corporate Governance by the KLSE in the year 2001 might yield different results. Future studies should examine the effect of the Code on the level of corporate governance practised by KLSE listed companies and investigate the relationship of the variables with the level of diversification. Another potential limitation is related to the definition of what constitutes control in a company. The present study used five percent level as a cut-off point for determining the presence of the outside blockholding although it was by necessity, somewhat arbitrary. However, this criterion was provided by the *Company Act 1965* to describe "substantial shareholder".

ENDNOTES

- ¹ See for example Article 73, Table A, Fourth Schedule of Companies Act 1965 (Specimen articles of association).
- ² Note that beginning 1 January 2001, IAS 14 was superseded by MASB 22.

- ³ Major shareholders as defined by KLSE listing requirement are shareholders having at least 5 percent of the aggregate of nominal amounts of all the voting shares in the firm. Major shareholders are also substantial shareholders as defined in Section 69D, Companies Act 1965 (before amendment in 1998).
- ⁴ See Part 4 of Malaysian Code on Corporate Governance.
- ⁵ Some companies disclosed both direct and indirect interests and in many cases the same indirect shareholding was disclosed many times especially if the executive directors were family related. Hence, the problem of double counting could occur although great care was exercised to avoid this problem. Five companies were found to have managerial ownership of more than 100 percent and they were coded 100 percent for the purpose of this study. Note that maximum number for HSALES is also one as there was one case where a company disclosed two business segments but the figure for one of the segments was zero. However, the regression analyses without these companies produced similar results and do not alter the conclusion of the paper.
- ⁶ Gujarati (1995) suggests that multicollinearity may be a problem when the correlation exceeded 0.80 or if the VIF of a variable was more than 10.
- ⁷ The T-test assumes the mean differences to be normally distributed while variances of each variable can be equal or unequal. The Wilcoxon Signed-Rank test is a nonparametric procedure used with two related variables to test the hypothesis that the two variables have the same distribution. They make no assumptions about the shapes of the distributions of the two variables. Note the Wilcoxon rank sum test is more appropriate than that Mann-Whitney U-Test if one or both sample sizes are greater than 10 (Jaccard & Becker, 1990).
- ⁸ Note that the original uncorrected OLS results were very similar.
- ⁹ The detailed results of the sensitivity analyses are available upon request.

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